## Overseas Business Insights

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# The Startup and Tech Sectors in Minas Gerais, Brazil

The strategic importance of the tech sector in the state of Minas Gerais (pop. 20 million) is increasing for both the public and private sectors. A study published in early 2015 by the Sociedade Mineira de Sofware (FumSoft) counted 5,000 information and technology (IT) companies in Minas, 70 percent of which are located in the Belo Horizonte metropolitan area. These companies account for over \$600 million in revenues, or around 1.6 percent of the

state's gross domestic product. Associations of private IT companies launched the Minas Gerais Technology and Innovation (MGTI) 2022 project, aiming to turn Minas



into the Brazilian state with the largest fraction of ITrelated GDP (\$2.4 billion in revenues) by 2022.

The public sector has followed suit. Patent applications have increased at the largest university in the state, the Federal University of Minas Gerais (UFMG), particularly in the areas of Biotechnology, Engineering, and Pharmacy. Currently, UFMG is ranked number one amongst federal institutions in Brazil in terms of

patent requests, with over 700 registered requests and 47 granted patents. Declaring its goal of turning Minas into "the largest site of technological entrepreneurship in Latin America," the State Government has launched two editions of a prestigious startup accelerator program and is preparing a third.

UFMG has a history of providing innovative technology to the digital world. In 1998, a student and his professor launched a search engine

(continued on page 2)

# Argentina: Renewable Energy Policy and Potential Transport Plan

Local experts forecast that in order to meet current peak demand and address growing base demand, Argentina must add 7000 megawatts to installed capacity over the next five years and expand and upgrade the transmission and distribution networks. Although the easiest way to add ca-

pacity would be to expand thermoelectric generation, the nation's thermal generation plants, which have suffered from lack of maintenance, are approaching the end of their lifecycle. Since 2009, the plants have been operating at only 70-75 percent capacity.

Local energy analysts believe that adding renewable generation can be done more quickly than adding new hydro or nuclear power, or upgrading existing thermal plants. Government experts note that developing new wind sources may be quicker and require less capital than carbonbased alternatives.

The cost of generating electricity using imported diesel reached up to \$600 per megawatt hour in 2014, a figure the Argentine Renewable Energy Association (Camara Argentina de Energias Renovables or "CADER") has noted is six times greater than many

#### Argentina (continued)

renewable energy options. Argentina already has a small national renewable energy industry that includes several wind turbine and wind component producers and solar panel distributors and operators. Argentina's Congress approved a newly revised Renewable Energy Law (27.191) in October 2015 that extends a 2016 deadline for generating eight percent of electricity from renewable sources by a year and sets a new goal of 20 percent renewable energy by 2025. It incorporated new income and sales tax benefits to incentivize use of renewable energy. A <u>CADER analysis</u> estimates that complying with the provisions of the renewable energy law will generate 60,000 new jobs.



One challenge for using renewable energy for electricity generation has been lack of available financing at competitive rates. Since 2009, stateowned power company Energía Argentina Sociedad Anónim (ENARSA) has sponsored a program to promote more electricity

generation using renewable sources (Generación de Energía a partir Fuentes Renovables or GEN-REN). However, of the projects designed to add 1000 MW to the grid that were offered for bids in 2010, only 20 percent moved forward due to lack

of funding. The new renewable energy law established a renewable energy development fund (Fondo para el Desarollo de Energías Renovables or FODER) that will receive the equivalent of 50 percent of the savings generated during the prior year by replacing imported fossil fuels

with energy generated using renewable sources. The money will be used to grant loans, make capital contributions, and provide project financing. ENARSA recently reported to the press it is ready to dust off and put into immediate production some of its projects.

### Minas Gerais, Brazil (continued from page 1)

called Miner, born out of a master's thesis. The student and professor built a company based around the search engine, founding Akwan Information Technologies Inc. Google bought Akwan in July 2005, in its only acquisition in Latin America, and transformed the company into their Latin American R&D Center.

The tech cluster in Belo Horizonte, now known as "San Pedro Valley," aspires to Silicon Valley success and currently includes over 300 startup entrepreneurs. The cluster publicly touts its advantages of a lower cost of living in Belo Horizonte compared to Rio de Janeiro and Sao Paulo and the presence of a well-educated workforce - four of the top

ten ranked universities in Brazil are located in Minas Gerais.

Tech Parks have also begun to flourish in Minas Gerais, complementing the growth in start-ups. One of the largest, the Technological Park of Belo Horizonte (BH-TEC), is located near the UFMG campus. BH-TEC groups together 17 companies with a combined reve-

nue of \$27 million in 2014.

The tech park represents a joint venture that includes UFMG, the Federation of Minas Industries (FIEMG), the City Hall of Belo Horizonte, the Minas Gerais State Government, and the Brazilian Service of Support to Small Companies (SEBRAE).

### Mexico Scores Strong Success with Third Oil and Gas Auction

In Mexico's third auction of contracts, held on December 15, in its Round One series of tenders to private sector companies to develop oil and gas resources, Mexico's National Hydrocar-

bons Commission (CNH) awarded all 25 contracts on offer. All contracts were for development of mature onshore oil and gas fields in three regions of Mexico. Five of the fields are located in Chiapas state, seven in Nuevo León, five in Tabasco, two in Tamaulipas, and six in Veracruz. Twenty of

the 25 areas were awarded to Mexican companies participating individually, one to a Mexican-Dutch consortium, another to a Mexico-U.S. consortium, and the final three fields to individual Canadian firms. Winning companies and consortia now have 140 days to sign license contracts with GOM authorities.

Small But Productive Fields on Offer

The 25 fields offered in the third phase auction included a mix of small, mature onshore oil and gas fields, some of which feature ongoing production and others which have been underdeveloped or abandoned. The fields contain between 10 and 86 percent (56 percent combined proven and probable re-

serves of approximately 49 million barrels of oil equivalent in total. Pedro Joaquin Coldwell, Secretary of Energy, said the fields could attract investment of \$1.1 billion and collectively produce



77,000 barrels of oil equivalent per day when they reach peak production in about three years. The CNH president explained that this would boost crude oil production by 1.6 percent annually, and noted the sites will also produce nearly 204 million cubic feet of natural gas a day over the next several years.

Winning Bids Exceed Government's Minimum Income Requirements

CNH awarded contracts to bidder offering the biggest share of pre-tax profits to the government, via a weighted formula which includes an investment commitment. Bidders offered royalties on average), all above the minimum

ranges of one to ten percent required by the Secretariat of Finance and Public Credit (SHCP). A government official explained this means the government will receive between 18 and 93 percent (63

> percent on average) of gross revenue from the auctioned blocks. Moreover, companies offered, on some blocks, twice the minimum requirements for work and equipment investments, which some experts estimate could be up to \$7 million per block. SHCP said the auction results show that despite the complex international environment, Mexico offers adequate geological, contractual, and institutional stability con-

ditions to attract productive, long-term oil and gas investment.

#### **Production Timeline**

Bid winners likely will be able to take control of their blocks in the second quarter of 2016, after fulfilling CNH requirements (a 140 day maximum period) to confirm contract details. The companies then could begin production quickly in the blocks that contain existing wells and infrastructure. The government anticipates this new production will help reverse declining national production (oil and gas output has dropped every year since 2004) and will generate new revenues from formally dormant or marginally productive wells.

#### Colombia Cacao Potential

Colombia's cacao production, if boosted, could help alleviate the one million ton worldwide deficit the International Cacao Organization's (ICCO) estimates by 2020. According to local experts, 15 percent of Colombia's cacao comes from highyield areas that produce between 2,000 kg and 3,000 kg per hectare, among the highest yields worldwide and well above the largest cacaoexporting countries in West Africa, which average 350 to 600 kg per hectare. Although Colombia's cacao production in 2015 was relatively limited at 50,000 tons, farmers planted on a mere seven percent (or 150,000 acres) of the 1.85 million hectares considered suitable for the crop.

In addition to being high-yield, 95 percent of Colombian cacao production is rated "fine or flavor," a distinction assigned by the ICCO to differentiate higher quality beans from bulk cacao. In October, Colombian brand Cacao Hunters won four gold medals and one silver medal at the International Chocolate Awards in London for its superior quality.

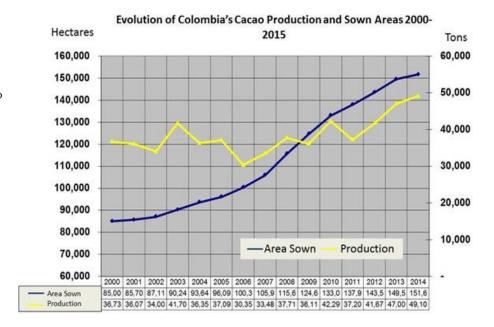
In order to boost exports, expected to reach 10,000 tons in 2015 up from zero in 2011, farmers will need to modernize their production techniques. One local expert estimates that over 50 percent of farmers still use traditional, inefficient methods for cultivating cacao. This explains why production only increased by 25 percent during a time when farmers doubled their planted hectares. To respond to this challenge, Colombia's

Agricultural Ministry has partnered with the National Federation of Cacao Producers (Fedecacao) on a \$5 million publicly-funded initiative to provide new equipment and training to farmers for cacao processing. The program assists 4,200 of the 35,000 cacao producers.

On September 22, President Juan Manuel Santos said publicly that a stable, profitable and legal alternative to coca cultivation is key to reintegrating Revolutionary Armed Forces of Colombia (FARC) combatants into the Colombian economy. According to local experts, cacao is an ideal substitute given that it grows in the same terrain and climate as coca. In Santander department, a crop substitution program is regarded by experts as successful.

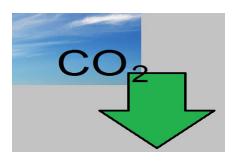
USAID has cacao projects in 16 of Colombia's most violence-torn municipalities as part of *Colombia Responde*, a program to help the government rebuild

social connections and foment citizen trust in formal institutions. Over the last ten years, USAID has helped over 21,000 farmers by providing stable, viable livelihood opportunities, and current programming connects approximately 4,000 families to the chocolate industry, helping them earn a steady income through cacao production. Additionally, USAID and USDA plan to launch Cacao for Peace (CFP), a five-year, \$5 million partnership to help strengthen key agricultural institutions in the public and private sectors with cooperative research, technical assistance, and the application of scientific research to agricultural practices through farmer education. CFP will include components related to cooperative cacao research and help establish a world-class Public/Private Center for Excellence for Cacao Science in collaboration with the Colombian government and quasigovernmental entities.



#### Brazil Launches US \$25 Billion Energy Initiative

In mid-December, Brazil's Ministry of Mines and Energy launched a multi-agency distributed generation initiative, Pro-GD, that hopes to attract \$ 25 billion in investment by 2030. The Ministry forecasts that 2.7 million solar units installed over the period would generate 23,500 MW of clean energy, equivalent to half the output of the Itaipu hydropower dam. The government estimates that the overall initiative would create 30 jobs for every 1 MW installed. By 2030, the initiative would contribute to raising Brazil's non-hydropower renewables share to 23 percent vs. the current 13 percent (of which 9 percent is biomass, 4 percent is wind, solar is currently negligible). The initiative would also lower CO2 emissions by 29 million tons, which would contribute to Brazil's goals of cutting greenhouse gas emissions (based on 2005 levels) by 37% in 2025 and reach a 43% reduction by 2030.



In a December 15 presentation on the initiative, and with Electrobras, the Brazilian Association for Solar Energy (AbSolar), and the electricity regulator (ANEEL) present, Ministry officials outlined industrial and residential uses for distributed generation and announced that the government will encourage distributed generation at federal universities, public hospitals, and other federal buildings. Plans for a distributed generation project to provide power to the row of ministries in downtown Brasilia were also noted.

A working group including ANEEL, the Energy Research Company (EPE), Center for Electric Energy Research (CEPEL), and the Chamber of Commercialization of Electric Energy (CCEE) will be formed. The working group plans to include other stakeholders and release a report in the spring of 2016 on how to amplify distributed generation development. The working group also will examine lines of credit to stimulate financing of projects, incentives for domestic production of renewable energy technologies, promoting national and international investment in renewable energy expansion in Brazil, and improving workforce capacity in renewable energy technologies. The Ministry of Mines and Energy is also working with the Ministry of Education to create partnerships with universities to increase workforce training to install and maintain distributed generation systems.

To create credits to encourage consumer generation and distribution, a new resolution by ANEEL will go into effect on March 1, 2016 allowing consumers to receive credits valid for 60 months (vs. the current 36 months) on their electricity bills if their self-generated power exceeds their consumption. Additionally, consumers would be able to use the credits to reduce their electricity bills not just where they are self-generating power but the credits could also be applied at other properties they own. Efforts will also be made to allow consortiums or co-op groups to share power from distributed generation with consortium or co-op electricity bills credited. The government plans to reduce import taxes on all capital goods used in solar generation from 14 percent to 2 percent until December 31, 2016 (this expands a previous 14% to 2% reduction that only applied to importing photo-voltaic modules). Although the specifics are not yet clear, the national development bank BNDES may also provide favorable terms for projects to install distributed generation systems and other energy efficiency projects at public hospitals and schools.

According to government estimates, it currently costs nearly \$7,000 for the average Brazilian residence to install a solar system. If the initiative realizes its goals, the government estimates that those costs would be cut in half and consumers would get a return on investment within 10 years.



For Caribbean and Latin American Markets, the Department of Commerce has many resources to assist U.S. firms including market research, trade show calendars, trade delegation calendars, etc. Check out their "Trade Americas" and "Look South" websites:

http://export.gov/tradeamericas/index.asp

http://export.gov/tradeamericas/looksouth/index.asp



The U.S. Government's main website to assist U.S. businesses at home and abroad. URL at http://business.usa.gov/



The Business Information Database System (BIDS) is a portal built to help U.S. businesses learn about significant international commercial opportunities. The site connects U.S. business to detailed information about each project as well as information to contact U.S. embassies overseas. URL at http://bids.state.gov/



The Direct Line program provides a unique opportunity for American businesses, particularly small- and medium-sized enterprises, to engage directly via webcast with U.S. Ambassadors overseas. The program is open to U.S. companies – whether they are already in the country where the Ambassador serves or if they are interested in expanding their businesses there. Webcasts will vary in topic according to the specific needs for business in a given country. URL at http://www.state.gov/directline/



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